

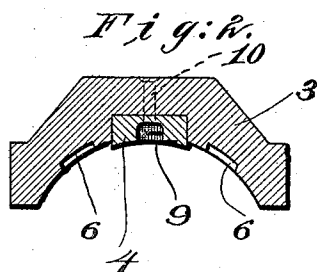
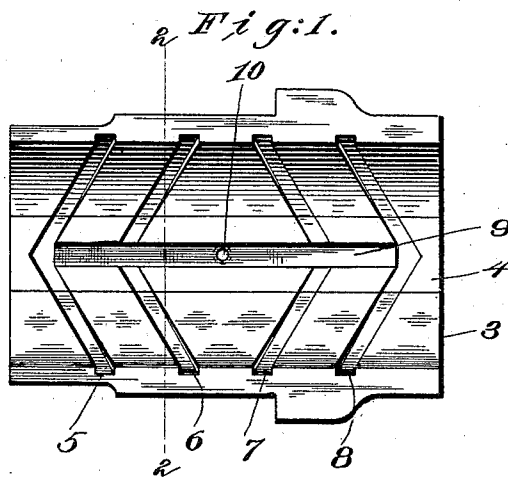
No. 649,302.

Patented May 8, 1900.

W. A. HARDY.  
JOURNAL BEARING.

(Application filed Feb. 5, 1900.)

(No Model.)



Witnesses  
W. C. Lumsford,  
Edward F. Allen.

Inventor.  
William A. Hardy,  
By Leroy & Morgan  
Attys.

# UNITED STATES PATENT OFFICE.

WILLIAM A. HARDY, OF FITCHBURG, MASSACHUSETTS.

## JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 649,302, dated May 8, 1900.

Application filed February 5, 1900. Serial No. 3,981. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. HARDY, a citizen of the United States, residing at Fitchburg, county of Worcester, State of Massachusetts, have invented an Improvement in Journal-Bearings, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention relates to journal-bearings; and the object of the invention is to provide an effective appliance of this character having means to prevent waste of the lubricant and to effect the uniform distribution of  
15 the same over the bearing-surface, and it is in the nature of an improvement upon the device covered by Letters Patent No. 306,249, granted to me October 7, 1884.

20 The improved bearing has a groove preferably in its center and channels at opposite sides of the center, disposed, respectively, in opposite directions and converging outwardly, the edges of the channel when the journal is rotating scraping off the lubricant  
25 upon the bearing-surface and throwing the same toward the middle of the box, and in the present case such lubricant is thrown into said groove, which extends longitudinally of said box or bearing, whereby it cannot escape  
30 from the ends thereof, this being of particular advantage when the journal or axle is running at a high rate of speed, where the tendency to eject the lubricant is marked, but by reason of the improved construction  
35 this waste cannot occur, for the groove mentioned catches and stores the lubricant. This groove is in the nature of a reservoir, and it is adapted to contain a comparatively large quantity of lubricant, whereby constant ap-  
40 plications of the latter to the journals are unnecessary. A duct or port preferably leads into this groove and furnishes a means whereby the same can be readily and quickly supplied with the lubricant.

45 The invention is shown in one simple embodiment thereof in the accompanying drawings.

Figure 1 is a face view of a journal bearing or box embodying the invention, and Fig.  
50 2 a transverse section taken in the line 2 2, Fig. 1.

The invention is illustrated in connection with a car-axle box of the kind represented in Letters Patent No. 300,362, granted to me June 17, 1894, and said box comprises a shell  
55 or case, as 3, provided with a projecting central portion 4, which may be of softer metal than that of said case and which receives the pressure from the journal until the engaging surfaces of the parts are properly  
60 fitted to each other. The inner surface of the box is shown having transverse channels, as 5, 6, 7, and 8, illustrated as arranged in series at opposite sides of the center of the box. It will be seen upon inspection of Fig.  
65 1 that one of the series of channels extends in one direction, while the other extends in the opposite direction, and that they converge outwardly. These channels serve to distribute the lubricating material evenly  
70 over the bearing-surface and also to throw said material contained in said channels and scraped from the bearing-surface by the edges thereof toward the center of the box. When,  
75 however, the journal is running at a high rate of speed, there is a tendency to expel the oil from the ends of the box, and to prevent this I have grooved the inner face of the case 3, as at 9, the groove extending longitudinally  
80 thereof and in its center. It will be seen also that all the transverse channels lead or open into the groove 9. In some instances the projecting portion 4 can be dispensed with, and of course in such a case the groove  
85 will be formed directly in the body of the box. It will be seen that both ends of said groove are closed, and hence when the lubricant is thrown forcibly into said groove said  
90 ends will prevent the same from going beyond the same. A duct or port, as 10, communicates with the longitudinal groove 9 and serves as a simple means to furnish the same with the necessary lubricant to supply the bearing parts.

The lubricant within the groove can pass  
95 practically the entire length of the case, so that all portions of the bearing-surface can have the same delivered thereto.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A bearing having a groove extending

longitudinally thereof and closed at both ends, and transverse channels at opposite sides of the center of said bearing, the edges of the channels serving to throw a lubricant  
5 into said groove.

2. A bearing having a groove extending longitudinally thereof and closed at both ends; and channels at opposite sides of the center of said bearing; disposed respectively  
10 in opposite directions and converging out-

wardly; the edges of the channels serving to throw a lubricant into said groove.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM A. HARDY.

Witnesses:

WALTER A. HARDY,

WILLIAM H. WHEELER.